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Infrastructure, environment, buildings

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Report from the Independent Consultant, ARCADIS

INTRODUCTION

This is the second report on the Bay Delta Conservation Plan (BDCP) from the Delta Stewardship Council's (the Council) independent consultant. This report provides a summary of major unresolved BDCP issues identified to date and provides our initial response to questions from the Council during the August 26, 2010, Council meeting. Our review is based on attending ongoing BDCP meetings and reviewing publicly available BDCP materials. In the past month, we have contacted state and federal agencies involved in BDCP (CDWR, USBOR, CDFG, USFWS) to gain direct access to information to better assess the status of BDCP.

The BDCP final draft is scheduled for release on November 18, 2010, and much of the BDCP document is still under development. The BDCP Steering Committee recognizes that there are unresolved issues and that various key decisions still need to be made (for example, BDCP Key Decisions by Major Issue, BDCP Steering Committee, April 22, 2010).

MAJOR UNRESOLVED ISSUES

In our review of available portions of BDCP documentation, we have developed a preliminary list of major unresolved issues that are divided into five themes: policy, programmatic, regulatory, technical, and future uncertainties. These issues, which have implications on either ecosystem or water management, or both, are briefly described below and are listed in full in an attachment to this report.

1. **Policy – Ecosystem and Water Management**

   BDCP compliance with 2009 Delta Reform Act (CA SBX7 1) provisions is not fully supported to date. The BDCP Scoping Report (March 2010) states that the purpose of BDCP is to: "Restore and protect the ability of the SWP and CVP to deliver up to full contract amounts, when hydrologic conditions result in the availability of sufficient water…" In its current form BDCP does not appear to

evaluate a wide range of conveyance alternatives, nor does it appear to consider alternatives that will reduce current levels of reliance on the Delta for water export. BDCP stakeholders have suggested that a revised purpose and need statement should be developed.

It appears that BDCP assumes full contract delivery as a goal and does not provide an analysis of ecosystem benefits that may be gained from reduced exports. In addition, information available on operational criteria for proposed BDCP conveyance facilities does not appear to consider a full range of operational scenarios and associated alternatives, for both near- and long-term operations.

We understand that BDCP has begun performing system model runs that consider the recently released SWRCB flow criteria in proposed operations of the conveyance system. However, the scope of the evaluation is not yet defined; this is an example of information that is still forthcoming. The importance of the SWRCB flow criteria is defined in the Delta Reform Act: “For the purpose of informing planning decisions for the Delta Plan and the Bay Delta Conservation Plan, the board shall, pursuant to its public trust obligations, develop new flow criteria for the Delta ecosystem necessary to protect public trust resources.” (Water Code § 85086(c)).

Addressing the SWRCB flow criteria requires BDCP operational scenarios that support both the quantity and pattern of flows needed for covered fish and other aquatic species. This issue has yet to be addressed. The SWRCB report concludes that, under the current physical configuration of the Delta, the quantity of in-Delta water currently provided for fish is insufficient to maintain the ecosystem or to support recovery.

BDCP stakeholders have also expressed concern regarding the currently anticipated release of the draft BDCP document prior to the release of the draft EIR/EIS. It has been noted that the BDCP Planning Agreement requires concurrent release to facilitate adequate public review and comment.

2. Programmatic – Ecosystem and Water Management

At this time, clear project descriptions for BDCP/DHCCP elements are not available for our review. In addition, BDCP biological objectives for restoration and species recovery are not clear; this is a key issue that has been pointed out by various stakeholders and that needs further investigation. The BDCP Steering Committee recognizes the need for more specific goals and objectives and clear species recovery goals.

There is also lack of clarity on how various elements of BDCP will be integrated and how they will relate to implementation of the overall plan. The proposed

adaptive management program is inadequately developed. It lacks full integration of technical information into a coherent implementation plan and there is a need to define clear performance objectives as well as an outcome-based strategy linked to implementation decision-making and governance. Proposed BDCP governance, including definition of the management entity, operations, and decision-making processes, is not yet fully defined.

As described in our first report, it remains unclear if BDCP will meet its schedule, and whether there will be sufficient time to adequately address comments and evaluate alternatives prior to release of final public draft. At this time, the cost of BDCP implementation, the sources of funding, the share arrangements, and funding guarantees are not well defined.

3. Regulatory – Ecosystem

The "White Paper on Application of the 5 Point Policy - 04-29-10" states that the Habitat Conservation Plan (HCP) should include explicit biological goals and objectives that provide a clear basis for proposed BDCP conservation measures. The adequacy of BDCP to comply with HCP requirements and with Natural Community Conservation Plan (NCCP) requirements is not fully developed. The benefits to be realized by covered species from proposed BDCP conservation measures are not yet defined.

It will be difficult for federal agencies to issue permits if BDCP does not include: 1) clearly defined and scientifically supported biological goals and objectives; 2) an adaptive management plan that tests alternative strategies for meeting those biological goals and objectives; and 3) a robust framework for adjusting future conservation actions to meet actual conditions. BDCP also does not currently provide funding assurances as required by the HCP process.

In addition, as an NCCP, BDCP will need to address impact mitigation, will need to demonstrate an effective species recovery program, and will need to support delisting of listed species and help preclude listing of additional species in the future. The recent ISA report (Reed et al, 2010) discusses the need to measure both individual and population-level performance. These metrics should link habitat-specific attributes of quantitative estimates of abundance with quantitative measures of movement and distribution. BDCP performance metrics must be measureable and relate/link to fish vital demographic rates.

4. Technical – Ecosystem and Water Management

Though BDCP is an open process, limited information is publicly available on DHCCP, under which the preliminary engineering and design is done. It is important that we gain access to technical information that has led to key decisions. Major unresolved technical issues include:

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4.1. The role and adequacy of BDCP system modeling efforts to date is unclear.
4.2. Additional characterization of proposed near-term and long-term operations with respect to a transparent, real-time operational decision making process is needed.
4.3. Specific biological goals and objectives remain to be fully defined. The proposed logic chain is not fully developed and it is not yet integrated with proposed conservation measures and specific BDCP biological goals.
4.4. The ecological system models are incomplete and not fully integrated.
4.5. The role of stressors is incomplete, and improved linkage should be provided between stressors and conservation measures with respect to BDCP goals and objectives.
4.6. It is not yet clear how certain species will benefit from proposed conservation measures. The proposed Adaptive Management Program does not appear to link conservation measures to predicted outcomes.
4.7. Monitoring programs and scientific investigations for conservation measures are as yet unspecified.
4.8. Currently there are insufficient descriptions of the effects of turbidity on fish movement and survival.

5. Future Uncertainties – Ecosystem and Water Management

There are many future uncertainties associated with BDCP. For example, the criteria for evaluating conservation measures is not yet clear, and the ability of proposed conservation measures to prove effective in addressing targeted stressors appears uncertain. Also the ability of BDCP to adapt to changes in covered activities, regulations, and other circumstances does not appear to have been fully addressed to date.

In addition, invasive species present an ongoing and increasing risk to the viability and distribution of native aquatic organisms and communities within the Delta. Limited measures for addressing invasive species impacts have been included within the broad suite of conservation measures proposed under BDCP. The efficacy of proposed measures is not well supported and significant future uncertainty persists with regards to the effects of proposed BDCP actions on the distribution, abundance, and ecological influence of invasive species.

We have not yet been able to completely review other unresolved issues and future uncertainties such as the potential for climate change and flood and risk management.

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COUNCIL QUESTIONS AND REQUESTS

At the August 26, 2010, Council meeting, Council members requested additional input regarding clarification of the logic chain and the associated need for an adaptive management program.

A logic chain has been strongly recommended to provide the overall structure and necessary linkages to ensure that BDCP conservation measures achieve biological goals and objectives (to be defined) and ecosystem/species recovery goals. The logic chain defines the flow of information that supports the adaptive management process to identify what has been learned and how this information will be used to inform ongoing actions and the decision-making process.

Because there is considerable uncertainty as to the likelihood that conservation measures will achieve the biological goals and objectives, BDCP will need to incorporate monitoring and adaptive management to increase the likelihood that it will meet its conservation goals. Because of significant data gaps, a strong adaptive management program is essential for HCPs and NCCPs.

Recent review by the Delta Science Program of the proposed logic chain process provides insight and recommendations for developing program goals and objectives. The science panel found that a logic chain should be applied to clearly link goals, objectives, actions, and outcomes. We agree with the request by federal agencies that BDCP incorporate the recommendations from the Delta Science Program into development of biological goals and objectives.

The Council requested additional information from the consultant team that will require more study:

1. How is BDCP evaluating risks associated with floods and potential levee failures?
2. What would achieve the goal of restoring the ecosystem, a canal, a tunnel or something else?
3. What are examples of alternative prototypes of practical adaptive management programs that include governance and that could be used to support both ecosystem recovery goals and water management goals?

NEXT STEPS

We are currently addressing Council requests and will report on our findings at future Council meetings. In addition, we will continue targeted review of BDCP materials and update our list of major unresolved issues. At the Council's request, we are assisting Council staff in preparing a second scoping letter for the Council, as a responsible agency, to send to the California Department of Water Resources.